

EXHIBIT 2

BUILDING INFORMATION MODELING (BIM) PROTOCOLS

I. General Principles

- 1.1 This Exhibit does not effectuate or require a restructuring of contractual relationships or shifting of risks between or among the Project Participants, except as otherwise set forth in the Governing Contract and this Exhibit.
- 1.2 This Exhibit is not intended to create privity of contract among any Project Participants beyond that which otherwise exists at law or by the terms of the Governing Contract.
- 1.3 Each Party to the Governing Contract shall append or incorporate, and shall cause each Project Participant with which it is in privity to append or incorporate, this identical Exhibit in all contracts for which any other Project Participants are to perform obligations to be modeled. All such contracts shall contain flow-down provisions requiring that the provisions of this Exhibit be passed downstream to subconsultants and subcontractors, as applicable.
- 1.4 Nothing in this Exhibit shall relieve the Design Professional of Record (“DPOR”) from its obligation, nor diminish the role of the DPOR, as the person responsible for and in charge of the design of the Project.
- 1.5 Participation of the Design-Build Firm, or its subcontractors and suppliers in Contributions to a Model shall not constitute the performance of design services.
- 1.6 Unless otherwise agreed in the BIM Execution Plan, a Design Model is not intended to provide the level of detail needed in order to extract precise material or object quantities.
- 1.7 In the event of a conflict between the contents of a Design Model and any other Model, the Design Model shall take precedence.
- 1.8 If any Project Participant becomes aware of a discrepancy between a Model and either another Model or another Contract Document, such Project Participant shall promptly notify the other Party or Parties to that Project Participant’s Governing Contract and the Information Manager (IM).
- 1.9 Unless otherwise agreed in the BIM Execution Plan, the dimensional tolerances provided by the Contract Documents in the Governing Contract shall apply to dimensions in a Model.
- 1.10 In the event of an inconsistency between this Exhibit and the Governing Contract, the Governing Contract shall take precedence.

II. Definitions

- 2.1 Affiliated Contract means any contract relating to the Project to which an identical Exhibit is attached and in which that identical Exhibit is incorporated, other than the Governing Contract.
- 2.2 Construction Model means a Model that (a) consists of those aspects of the Project that are to be modeled as specified in the BIM Execution Plan prepared pursuant to this Exhibit; (b) utilizes data imported from a Design Model or, if none, from a designer's Construction Documents; and (c) contains the equivalent of shop drawings and other information useful for construction.
- 2.3 Contract Documents, as defined in the Governing Contract, is modified to include all Design Models, unless otherwise specified in the BIM Execution Plan.
- 2.4 Contribution means the expression, design, data or information that a Project Participant (a) creates or prepares, and (b) incorporates, distributes, transmits, communicates or otherwise shares with other Project Participant(s) for use in or in connection with a Model for the Project.
- 2.5 Contributor means a Project Participant who makes a Contribution.
- 2.6 Design Model means a Model of those aspects of the Project that (a) are to be modeled as specified in the BIM Execution Plan prepared pursuant to this Exhibit and (b) have reached the state of completion that would customarily be expressed by an architect/engineer in two-dimensional Construction Documents. This shall not include Models such as analytical evaluations, preliminary designs, studies, or renderings. A Model prepared by an architect/engineer that has not reached the stage of completion specified in this definition is referred to as a Model.
- 2.7 Drawings means (a) those two-dimensional plans, sketches or other drawings that are Contract Documents under the Governing Contract and are created separately from, and are not derived from, a Model and (b) those two-dimensional projections derived from a Model supplemented with independent graphics and annotations specified by the Parties to be Contract Documents.
- 2.8 Federated Model means a Model consisting of linked but distinct component Models, drawings derived from the Models, texts, and other data sources that do not lose their identity or integrity by being so linked, so that a change to one component Model in a Federated Model does not create a change in another component Model in the Federated Model.
- 2.9 Full Design Model means a Model consisting of coordinated structural, architectural, MEP and other Design Models designated in the BIM Execution Plan to be produced by the design team.

- 2.10 Governing Contract means the agreement to which this Exhibit is attached and in which it is incorporated, but excludes an Affiliated Contract.
- 2.11 Information Management means measures that protect and defend information and information systems with respect to their availability, integrity, authentication, confidentiality, and nonrepudiation. These measures include providing for restoration of information systems by incorporating protection, detection, and reaction capabilities.
- 2.12 Information Manager or IM means one or more individuals responsible for the BIM's Information Management program.
- 2.13 MEP means mechanical, electrical and plumbing.
- 2.14 Model means a three-dimensional representation in electronic format of building elements representing solid objects with true-to-scale spatial relationships and dimensions. A Model may include additional information or data.
- 2.15 Project Model means a Model consisting of the federation of a Full Design Model and one or more Construction Models designated in the BIM Execution Plan, or the Governing Contract, to be produced by Project Participants.
- 2.16 Project Participant shall be, and Project Participants shall include, each Party to the Governing Contract and each Party to an Affiliated Contract.

III. Information Management

- 3.1 The DPOR shall serve as the IM as part of the Design-Build Firm's Basic Services. The Owner and Program Manager may, in their sole discretion, replace the IM.
- 3.2 The role and responsibility of the IM with respect to a Federated Model of the Project, including the Project Model, shall be to perform or procure from a third party acceptable to the Owner the following functions:
 - 3.2.1 Create, delete, modify and maintain user accounts;
 - 3.2.2 Assign, delete and modify access rights to users;
 - 3.2.3 Apply access controls to users so that only authorized users of the Model can access only the data they are authorized to access;
 - 3.2.4 If appropriate, establish and maintain encryption-at-rest measures and encryption-during-transmissions measures;
 - 3.2.5 Record, at a minimum, the following information about each data entry by Model users in the Federated Model (including downloading of Models to the Federated Model):
 - (a) User name;

- (b) User role;
- (c) Contact information;
- (d) Date/time entered
- (e) Any additional information required to be recorded for each data entry as set forth in the BIM Execution Plan;

3.2.6 Backup and restore data;

3.2.7 Routinely run information system scans to maintain Model security;

3.2.8 Maintain and monitor information system logs so that only authorized users are accessing the Model and to ensure that there are no functional problems associated with the Model;

3.2.9 Install patches to close documented vulnerabilities in the Model;

3.2.10 Document and report any incident relating to the Model (including but not limited to an incident originating outside the Model that results in the Model being the victim of an attack) and take action to protect the Model;

3.2.11 Transfer unconditionally to a successor IM, at such times as directed by the Owner, all tangible and intangible property and information that came into its possession, custody or control in its capacity as IM;

3.2.12 Provide authorized users with access instructions and system requirements;

3.2.13 Respond to requests by authorized users for assistance in maintaining access; and

3.2.14 Perform any and all other responsibilities or functions as required of the IM in the BIM Execution Plan.

IV. BIM Execution Plan

4.1 As soon as is practicable, but in no event later than thirty (30) days after the execution of the Contract between the Owner and Design-Build Firm, the Project Participants shall meet, confer and use their best efforts to agree upon the terms of or modifications to a BIM Execution Plan. When agreed upon, the BIM Execution Plan and any modifications shall become an amendment to this Exhibit.

4.2 Unless otherwise agreed, the IM shall schedule and chair all such meetings.

4.3 The BIM Execution Plan shall address the following elements, but may include additional elements:

4.3.1 Contact information for each Project Participant

4.3.2 Identification of what Models are to be created, the purpose(s) each Model is intended to serve, and which Project Participant(s) is (are) responsible for creating each Model;

4.3.3 A definition of what Design Model or Models, if any, shall not constitute Contract Documents;

4.3.4 The spatial portions or areas of the Project to be modeled in each Model and the spatial portions or areas of the Project not to be modeled;

4.3.5 The expected content of each Model and the required level of detail at various Project milestones, which content includes:

- a. geometric and spatial data;
- b. object property data;
- c. object constitution data;
- d. provision for object parameters as place holders for cost and schedule data;
or
- e. authoritative source information;

4.3.6 A schedule for initial delivery of each Model to the IM;

4.3.7 A schedule for updating of each Model and preservation of versions of each Model and its constituent Models;

4.3.8 A definition of what Model or Models shall constitute part of the record documents for the Project;

4.3.9 Procedures and protocols for submission, for approval of Models including electronic stamping for designating a Model as a Design Model, and for notification of action on a request for approval;

4.3.10 Procedures and protocols for designating two-dimensional projections derived from a Model as Contract Documents;

4.3.11 Establishment of a common coordinate system;

4.3.12 Establishment of conventions as to units;

4.3.13 Conventions for defining critical dimensions and critical Model content;

4.3.14 File format to be used;

- 4.3.15 File-naming and object-naming conventions to be used;
- 4.3.16 File structure to be used;
- 4.3.17 Software to be utilized;
- 4.3.18 Measures needed to achieve interoperability of applications;
- 4.3.19 Two-dimensional reference Drawings;
- 4.3.20 Utilization of BIM for the RFI process, response protocol and timing, incorporation of responses into any Model;
- 4.3.21 Utilization of BIM for the Change Order process, response protocol and timing, incorporation of responses into any Model;
- 4.3.22 A schedule for BIM development, coordination and clash detection meetings among the Project Participants;
- 4.3.23 Engagement of the IM in these processes;
- 4.3.24 Utilization of a Project BIM website;
- 4.3.25 Procedures and protocols for confirmation of field changes through an as-built Project Model; and
- 4.3.26 Specification of Project close-out and final deliverables.

V. Risk Allocation

- 5.1 Each Party shall be responsible for any Contribution that it makes to a Model or that arises from that Party's access to that Model, and shall fully defend, indemnify and save harmless the Owner and its affiliates for all damages or claims that arise out of or are connected in any way to that Party's Contribution or access to a Model in accordance with the indemnification provisions of the Governing Contract. Such responsibility includes any Contribution or access to a Model by a Project Participant in privity with that Party and of a lower tier than that Party.
- 5.2 **Contributor's Dimensional Accuracy Representation.** Contributors make no representation with respect to the dimensional accuracy of the Contributor's Contribution to a Model. A Model can be used for reference only and all dimensions must be retrieved from the Drawings;
- 5.3 With respect to the issue of a waiver of consequential damages:

- (a) The Governing Contract shall govern the issue of any waiver of consequential damages arising from a Contribution; and
 - (b) Each Party waives claims against the other Parties to the Governing Contract for consequential damages arising out of or relating to the use of or access to a Model, including but not limited to damages for loss of use of the Project, rental expenses, loss of income or profit, costs of financing, loss of business, principal office overhead and expenses, loss of reputation or insolvency.
- 5.4 To the extent that any or all Design Models are included as Contract Documents, Project Participants may rely upon the accuracy of information in those Design Models.
- 5.5 The standard of care applicable to each Party regarding that Party's Contributions to or use of a Model shall be in accordance with that Party's Governing Contract.
- 5.6 Each Party shall use its best efforts to minimize the risk of claims and liability arising from the use of or access to its Model or the Project Model. Such efforts shall include promptly reporting to the relevant Project Participants any errors, inconsistencies, or omissions it discovers in its Model or the Project Model; however, nothing in this paragraph shall relieve any Party of liability it would otherwise bear under Section 5.1.
- 5.7 No Party involved in creating a Model shall be responsible for costs, expenses, liabilities, or damages which may result from use of its Model beyond the uses set forth in this Exhibit.
- 5.8 Design-Build Firm shall procure and maintain insurance acceptable to Owner to cover the risk of loss to electronic data, with minimum limits no less than those required by Owner, which insurance must cover all of the Design-Build Firm's and Design-Build Firm Personnel's Contributions or intended Contributions. Such insurance must, at a minimum, provide coverage for electronic vandalism to electronic data, including coverage for willful electronic alteration of data, introduction of viruses which impact electronic data, unauthorized use of electronic data, or denial of service to web site or email destinations. Design-Build Firm shall include this requirement in its contract with any other Project Participant and provide Owner with the coverage forms demonstrating compliance with this paragraph.
- 5.9 A defect in the software used in the creation, modification, federation or other use of a Model, including the Project Model, may, at the Owner's discretion, entitle a Party to a time extension or other excuse from performance, but only to the extent that the Party could not have avoided any delay or loss by the exercise of reasonable care. In addition, a Party has the duty to mitigate any such delay or loss.

VI. Intellectual Property Rights in Models

- 6.1 Each Party represents and warrants to the Owner that, at the time the Governing Contract was executed, the Party was the owner of all copyrights in all of that Party's Contributions. Subject to waiver of subrogation clauses, if any, contained in the Governing Contract, each

Party agrees to indemnify and hold the Owner harmless for claims of third parties arising out of, or relating to, claims or demands relating to infringement or alleged infringement of expression contained in that Party's Contribution as set forth in the Governing Contract.

- 6.2 Each Project Participant, including the Party to the Governing Contract, assign to the Owner without limitation the entire right, title and interest in and to the exclusive use or reuse of all of that Project Participant's Contributions in a Model, Design Model, Project Model, Federated Model, and the Full Design Model, which all aforementioned models shall be and remain the exclusive property of Owner as set forth in the Governing Contract.
- 6.3 Subject to the Governing Contract and the provisions of Section 6.1, the Owner grants to the other Party or Parties to the Governing Contract (a) a limited, non-exclusive license to reproduce, distribute, display, or otherwise use that Party's contribution for purposes of this Project only; (b) a limited, non-exclusive sublicense to reproduce, distribute, display, or otherwise use, for purposes of this Project only, the Contributions of the other Project Participants; and (c) a limited, non-exclusive license to reproduce, distribute, display, or otherwise use any Model containing such Contributions, or any other Model with which the Model containing such Contributions is federated or otherwise related, in each case for the sole purpose of carrying out the Project Participants' respective duties and obligations relating to this Project. This limited license shall include any archival purposes permitted hereunder or in the Governing Contract, but does not allow the licensee to reproduce, distribute, display, or otherwise reuse all or part of that Party's Contributions or any other Party's Contributions except as permitted herein or in the Governing Contract.
- 6.4 Unless otherwise limited herein or by express license-limiting terms in the Governing Contract, the non-exclusive license granted in this BIM Exhibit shall remain in effect as permitted by law. In addition, after final completion of the Project, the non-exclusive license shall be solely limited to keeping an archival copy of the Project-related Contributions.
- 6.5 Each Party in privity with the Owner shall require all other parties with whom that Party is in privity, that may be a Contributor to any model, to agree to all provisions of Section VI.